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ABSTRACT

The environmental scanning project described in this report was undertaken at Lane Community College (LCC) in Eugene, Oregon, to enhance the college's strategic planning process by anticipating events that might differ from the economic, social, and political conditions of the present. First, an overview is provided of the purpose and intent of the experimental project. The next sections look at the ways in which environmental scanning has been used within private and public sectors to identify and assign priority to major trends and to use this information to shape planning activities. Next, an overview of the environmental scanning project at LCC is presented, along with a list of sources selected for the environmental research. A series of trend abstracts are provided next, covering environmental impact; population; economics; social structure, values, and lifestyle; technology; education; and employment. Each trend abstract defines relevant terms, enumerates identifiable trends, discusses the possible implications of those trends, and identifies major information sources. The project report concludes with a 30-item bibliography on environmental scanning and strategic planning followed by four tables illustrating selected projections. (UCM)

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# ENVIRONMENTAL SCANNING PROJECT:

## A Dimensional Aspect of Needs Assessment in the Strategic Planning Process

Fall 1987

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Winter - Fall 1987
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JC 880 076

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A sense of the future is behind all good policies. Unless we have it, we can give nothing either wise or decent to the world.

-- C. P. Snow

THE QUESTION
...IS NOT
WHETHER WE
SHOULD
FORECAST BUT
RATHER WHETHER
WE SHOULD...
TRY TO IMPROVE
OUR FORECASTS.

A sense of the future not only pervades all good policies; it also underlies every decision of human beings. We eat expecting to be satisfied and nourished -- in the future. We sleep assuming that in the future we will feel rested. We invest our energy, our money, and our time because we believe that our efforts will be rewarded in the future. We build highways assuming that automobiles and trucks will need them in the future. We educate our children on the basis of forecasts that they will need certain skills, attitudes, and knowledge when they grow up. In short, we all make assumptions about the future or implicit forecasts throughout our daily lives.

The question, then, is not whether we should forecast but rather whether we should articulate, discuss, analyze, and try to improve our forecasts. The premise of explicit forecasting is that by moving beyond our ordinarily unarticulated assumptions about the future, we can better guide our current decisions to achieve a more desirable future state of affairs. It is a matter of whether we will go into the future with our eyes and our minds open or stumble into it with them closed.

- James L. Morrison, William L. Renfro, Wayne I. Boucher. Futures Research and the Strategic Planning Process, Implications for Higher Education, ASHC, ERIC, 1984.

## TABLE OF CONTENTS


Page

ENVIRONMENTAL SCANNING PROJECT PARTICIPANTS. . . . . 1

WHERE ENVIRONMENTAL SCANNING FITS INTO THE STRATEGIC PLANNING PROCESS . . . . . 2

OVERVIEW . . . . . 3

ENVIRONMENTAL SCANNING . . . . . 4

TREND ABSTRACTS:

- ENVIRONMENTAL IMPACT . . . . . 9
- POPULATION . . . . . .13
- ECONOMICS. . . . . .17
- SOCIAL STRUCTURE, VALUES, AND LIFESTYLE . . . . . .21
- TECHNOLOGY . . . . . .26
- EDUCATION . . . . . .31
- EMPLOYMENT . . . . . .37

ENDNOTES . . . . . .42

BIBLIOGRAPHY:

- FUTURES RESEARCH; ENVIRONMENTAL SCANNING; STRATEGIC PLANNING . . . . .43

APPENDIX: EMPLOYMENT TABLES . . . . . .46

# ENVIRONMENTAL SCANNING

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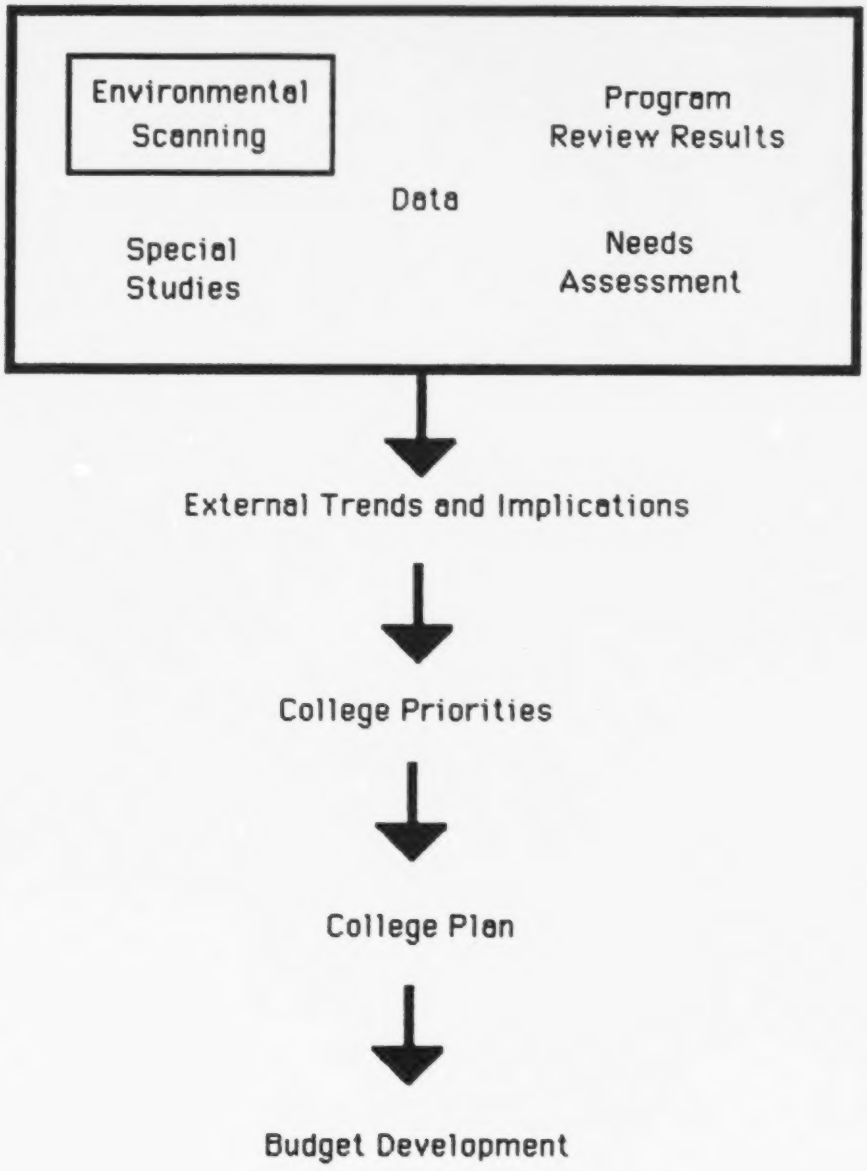
# The Strategic Planning Process



## OVERVIEW

ENVIRONMENTAL SCANNING PROJECT: A Dimensional Aspect of Needs Assessment in the Strategic Planning Process for Lane Community College.

### PURPOSE AND INTENT

The purpose and intent of this Environmental Scanning Project is to add dimension to Lane Community College's strategic planning process. Environmental scanning is part of a long-range planning process in higher education that is based on the assumption that there is a need to try to anticipate events that might differ from the economic, social, and political conditions of the present. It is an aspect that can meld or synthesize trends or events of the past, present, and future.

Lane's initial attempts at environmental scanning began informally by using its Marketing Task Force to identify external trends and by hosting a meeting to which all members of the campus community were invited to explore pertinent trends. This current environmental scanning project is experimental in nature and may act as a model for the on-going process of identifying the most important issues or trends for Lane Community College. Environmental Scanning is to be considered within the context of all aspects of the strategic planning process to give direction and/or emphasis in the formulation of activities and strategies addressing issues relevant to higher education, Lane Community College, and the broader community. The "Trend Abstracts" which make up this scanning project represent a possible model for further collaborative efforts using LCC staff, combining environmental scanning with traditional needs assessment.

## ENVIRONMENTAL SCANNING

Environmental scanning is a method of paying attention to the important things that are happening outside an organization and synthesizing this information in a way that is useful to planning.

This process has been used by a number of major corporations (Dayton Hudson, Monsanto, Shell Oil, McDonald's, the insurance industry, and United Way of America to name a few.)

According to researchers William L. Renfro and James Morrison, environmental scanning allows an organization to:

> ...identify important emerging issues that may constitute either threats or opportunities and includes attention to change, and regulatory development.[1]

In most of the organizations that use environmental scanning, scanning begins with a systematic and continuous review of magazines, newspapers, journals, and other sources. Typically, the "scanning" is done by staff who write short reports or abstracts documenting issues or trends and the implications of these trends for the organization. The most important trends are identified and used to direct planning activities.

Renfro and Morrison suggest that scanning offers three significant advantages when linked to planning:

- an opportunity to identify and analyze trends,
- an opportunity to develop and implement policy options, and
- the ability to impact and positively alter future outcomes.

At Lane, we are trying to improve our responsiveness by improving our college planning process. Recently, the college adopted a planning system that enables us to link fiscal and human resources to identified needs and priorities. We are now seeking ways to improve this system by improving the quality of information available to college planners, particularly the quality of Information about our external environment.

In the past, we have looked to our community for information, but we now believe that the traditional needs assessment survey is not the first step. If we are to be responsible to our community we must begin our planning activities by getting a firm grasp on the larger trends--regional, national, and international--that will shape the lives and work of people in our district. In turn, this information would be used to guide the college's community needs assessment. We feel this combination --the global vision provided by trend analysis and the grassroots wisdom of community needs assessment--will provide a powerful tool for planning programs and services to meet the current and future needs of our community.

Environmental scanning in its various forms is used increasingly in the corporate world and interest is growing in government and education. Recently, for example, environmental scanning was a major topic of discussion at the Annual International Conference of the Society for College and University Planners, where even Lane's modest efforts were of interest to other colleges' planners.

To date, we have used various methods to gather information about trends and the changing external environment. In 1984, our Marketing Task Force adopted a set of external planning assumptions--a compilation of demographic information and trends that provided some insight, but were not used to any great extent in planning.

This activity was adopted by the college's Planning Committee and served as an introduction to the planning process. An open meeting was held in May 1986 to generate trend information. Approximately 40 staff attended and generated a list of over 100 social, political, economic, and education trends that might have implications for the college.

We are committed to bringing this interest and energy together into an ongoing process of identifying and prioritizing major trends and to using this information to shape our planning activities for the next three to five years.

## Process

The cycle used by this researcher is listed below. The time period for this project began in January 1987 and continued through August 1987.

| | |
|---|---|
| January - March | Researcher became familiar with environmental scanning literature and with LCC's planning process.<br><br>Scanning topics were discussed, labeled, assigned, and prioritized.<br><br>Literature sources were identified for scanning.<br><br>Periodic meetings were held for direction, communication, and organization of material.<br><br>Scanning and documenting of literature sources was started as an on-going process. |
| March - June | Scanning and documenting of literature sources were continued, culminating in specific listings of pertinent articles and literature relating to scanning topics so that trends/events could appropriately be referenced for abstracting documents. |
| June - August | Compiling and synthesizing/integrating of project material to be presented in notebook form for the Planning Committee.<br><br>Abstracts of seven topic areas included in the notebook with length of written material limited to 2-3 pages.<br><br>Identifying and prioritizing process; taking trends in each topic area that have relevancy/impact for Lane Community College. |

## Sources Selected for Environmental Scanning Research:

**Newspapers:**

Register Guard (Eugene, OR)
Oregonian (Portland, OR)
New York Times
Washington Post
Wall Street Journal
Christian Science Monitor
USA Today

**Magazines:**

Time
Newsweek
US News and World Report
Business Week
Futurist

**Professional Literature:**

AACJC Journal
Chronicle of Higher Education
Higher Education and National Affairs
Kappan

**Special Publications:**

What Lies Ahead: Looking Toward the '90s. United Way of America, Strategic Planning Division, Alexandria, VA, 1987.

Emerging Trends: New Oregon Perspectives for the Year 2010 Commission on Futures Research Progress Report, Willamette University, Salem, OR, 1986.

"Straws in the Wind." Trend Analysis Program, American Council of Life Insurance, Washington, DC, 1986.

"Labor Market Information Reports." Oregon Employment Division, LMI, Information Reports, 1987.

# T R E N D

# A B S T R A C T S

Items cited as major sources may be found on file in the Institutional Research, Planning, & Evaluation Office, Lane Community College, Eugene, OR.

## ENVIRONMENTAL IMPACT

"If present trends continue, the world in 2000 will be more crowded, more polluted, less stable ecologically, and more vulnerable to disruption than the world we live in now...A keener awareness of the nature of the current trends, however, may induce changes that will alter these trends and the projected outcomes."

- Gerald O. Barney "The Global 2000 Report to the President"

### Definition

Environmental impacts may be natural or human-made and can be considered as issues or events that pose hazards or threats that endanger the integrity of humans, living organisms, the physical environment or natural resources. Topic areas identified from this environmental scanning project include: social development and perception of conservation and environmental thinking in the population; interrelatedness of environment to economic and social well-being; and the quality of life.

Topics include: energy, toxic waste/garbage; air pollution; water pollution; soil conservation/agriculture; timber; land development; habitat; urbanization; animal/species rights; natural disaster; acid rain; terrestrial events; the biosphere; related health issues/epidemics. Trends can be identified and interrelated globally, nationally, locally.

### Trends

1. Timber issues and related unemployment will remain as dominant issues in Oregon with automation and new technology reducing worker number needs. There is a need for retraining and transitional programs and services for displaced workers.

2. Research and monitoring of Oregon's logging/resource practices, fishing industry, and grass seed industry will continue. There will be developments in aquaculture and resource management to meet rising demands of population as well as economic increases in state and foreign markets with most natural resources available needed for industry.

3. Energy costs and availability will remain issues/events globally, nationally and locally with fluctuations in reliance on fossil fuels. Other energy sources will become more important but will not seriously challenge fossil fuel sources before the year 2000. Small hydroelectric systems will provide increasing amounts of electricity in years ahead.

4. Clean water will become a central issue globally, nationally, and locally as methods for managing water become more complex and demands from industry, urban centers, and agriculture increase and water becomes more scarce.

5. Air pollution, indoors and out, will continue to pose problems to health due to industrial and transportation emissions causing acid rain; toxins in building/construction materials; local agricultural and heat related byproducts mixing in the atmosphere; and weather/climate conditions or changes.

6. Toxic waste issues, garbage disposal, and nuclear waste and energy related issues or events will remain in the public eye as concern for clean water and conservation of energy enters/reenters public attention in the media and the legislature.

7. The AIDS epidemic will become increasingly critical with a need to establish public education services with an emphasis on public health issues/problems and practical educational services/programs.

8. Consistent with the social and economic goals of the United States, coalitions of governmental, academic, environmental, and private sector organizations will establish national networks for environmental education with centers based in local institutions of higher education.

9. Global environmental threats will play various roles in local impacts such as soil productivity and erosion; deforestation, and overgrazing; flooding; habitat destruction; draining; conversion of land to cultivation; urbanization; depletion and extinction of species; regeneration of atmospheric oxygen increasingly limited; raised levels of toxins in environment; and changes in climate and climate/weather cycles.

10. Non-formal environmental education will be found and put into nature centers, parks, government agencies, zoos, community organizations, and other non-formal educational programs. (Along with this trend will be the more sophisticated use of public relations and media to inform people about facilities programs and events -- use of networking and increasing business techniques such as market research.)

<u>Possible Implications:</u>

These trends point to studies for planning integrated curriculum and programs in the behavioral field of human ecology. Recognition of the interconnectedness of where and how individuals in the community "fit" on a personal level in relation to environmental schemes/cycles needs to be infused into educational processes at Lane Community College.

* If community response to environmental stress can be appropriately analyzed by educational planners, a first step may be taken toward understanding why people are encouraged or forced to live in hazardous circumstances. Programs, services, and curricula can then be more effectively related to what is needed in the community, and in deciding what the role of Lane Community College is in meeting those needs.

  Vulnrability to hazard is not always the result of foolhardiness, ignorance, or misunderstanding: it may be the result of involuntary pressures forced upon people both with and without their knowledge. The manner in which individuals and various social institutions cope with both pre-disaster preparations and post-disaster relief should therefore suggest something about the relationship between political power and vulnerability to environmental risks.[8]

* A sense of place and empowerment of individuals in relation to their community and daily lives through the educational system of higher education at Lane Community College should be considered in the broader context of environmental impact globally, nationally, and locally, and in the planning of needs assessment.

Major Sources for Trends:

Environmental Scanning Project Sheets entitled "Environmental Impact" (various subtitles). Research Project Scanning Sources Noted in Bibliographies and Scanning Sheets, 1987.

"An Introduction to the World Conservation Strategy
International Union for Conservation of Nature and Natural Resources"
United Nations Environment Programme
Prepared for the IUCN by Its Commission on Education, New York, NY, 1984.

"Coping with Environmental Hazards," Timothy O'Riordan. Geography, Resources, and Environment: Themes from the Work of Gilbert F. White, Vol. II. Robert W. Kates and Ian Burton, University of Chicago Press, 1986.

"Citizens Guide to Global Issues." Global Tomorrow Coalition, Washington, D.C., 1986.

Summary: "A National Network for Environmental Education." The Alliance for Environmental Education Incorporated, Washington, D.C., 1987.

"Outlook '86 - and Beyond." A Special Report Prepared by Edward Cornish and the Editors of The Futurist. World Future Society, Bethesda, MD, 1986.

What Lies Ahead: Looking Toward the '90s. United Way of America, Strategic Planning Division, Alexandria, VA, 1987.

Inquiry: Research at the University of Oregon. A Special Issue of Old Oregon Magazine. University of Oregon, Eugene, OR 1987.

"The 19th Environmental Quality Index." National Wildlife Federation. National Wildlife, 25:2, Feb./March, 1987.

"Trends in the Global Environment." Wisconsin Department of Natural Resources, Trends Analysis Group. Trends Bulletin, August, 1986.

## POPULATION

"The graying of America may be the most significant demographic change facing the United States in the next 50 years."

- What Lies Ahead: Looking Toward the 90's
United Way of America Strategic Planning Division

**Definition:**

Demography is the study of the characteristics of human populations. Size, growth, density, distribution, and vital statistics are measured and compared. Topic areas are identified with trends ranging from local to global perspectives.

**Trends:**

1. The population of Lane County will grow by about 21,000 people during each five year period between 1985 and 2000.[3]

2. Significant changes in the geographic distribution of Lane County residents are not anticipated in the next 15 years.[3]

3. The population of Lane County will become gradually older between now and the year 2000.[3]

4. There will be a continual slowing of the growth rate of the U.S. population. The annual growth rate of the U.S. is however, growing faster than all but three of the industrialized countries. The quality of life will be affected by unemployment and rising poverty.

5. Continued U.S. population growth is likely to have an adverse effect on the quality of life by contributing to water shortages and curtailment of basic community services, such as waste disposal, transportation, and police and fire protection.

6. Dramatic shifts in the age structure of the U.S. point to problems of a country caring for an aging population and also the number of children born to the 650 million baby boomers which will be substantial enough to elicit concern over present and future education, child care expenses, and education.

7. The proportion of children in the population will continue to decline with a sharp drop in proportion of young adults in the 1990's. This will affect federal government services and support with human services agencies altering programs in response.

8. The median age of America will continue to increase as the baby boom generation moves into its 40's with the proportion of Americans aged 65 and older changing little after 2005.

9. Roles of caregivers will become more complex with increased attention to more community-based services to meet long-term care needs of elderly. The rising growth of single-parent households will involve attention to child care needs and support programs.

10. Metropolitan areas now account for most of the nation's growth, with more than 76 percent of US population living in metropolitan areas (considered stable due to the decline in growth of non-metropolitan areas).

11. Greater proportional growth of minority populations will result in Americans increasingly living and working in more ethnically diverse environments.

12. Population and employment gains will be greatest in the South and West nationally. However, the rate of growth is expected to slow significantly with the South being the primary migration magnet. Most foreign immigrants to US will settle in South and West, with the West gaining more foreign immigrants.

13. Immigration surges will require development of support services such as English language and job counseling to ease cultural transitions.

14. Worsening problems will continue in developing countries faced with unprecedented population growth. This will affect world economies with U.S. reaction varying as global effects reach and impact specific localities and their economies. High rates of population growth and societies with a large proportion of youth are among factors identified as leading to conflict and war.

<u>Possible Implications:</u>

Population is not necessarily a cause of problems, but magnifies problems in different contexts and makes solutions more complex and difficult. Population problems focusing on limiting or increasing births, preventing deaths, or addressing immigration or urbanization cannot be fairly analyzed unless there is also a focus on efforts to raise standards of living. It seems to be an expectation of many people that the ways of solving people-pressures is technology. The basic causes of population problems are not technical, they are to be found in culture, custom, and morality. Basic ethical/moral issues of rights and responsibilities relating to human

reproduction have not yet been addressed directly by governments and international organizations in relation to sustainable development and carrying capacity of eco-bases.

Demographic optimists who believe that more than 10 billion humans can comfortably occupy the earth - and with ever increasing living standards - refuse to face some basic limitations on what can be done in the real world or the costs to human choice and freedom in accommodating ever increasing numbers.[4]

* Solutions to demographic/population issues and events imply that there will be an increased need for education involving human oriented service areas at Lane Community College in response to specific demographics of locality.

* There will be more attention to planning and policy regarding the external trends in human service offerings and opportunities in Lane County.

* Integrating and offering programs that human service areas cannot offer may be an aspect that Lane Community College may want to focus on, such as offering programs that emphasize positive/preventive coping strategies for rising human problems in a rapidly changing technological society.

* A response in educational programs or offerings in life-long learning tailored to the community will be needed, especially focusing on needs of single-parent education, child care services, health education/services, leisure activities, and continuing education of the structurally large group of baby boomers growing older together.

<u>Major Sources for Trends:</u>

Environmental Scanning Sheets entitled "Population." Research Project Scanning Sources Noted on Scanning Sheets, 1987.

"External Trends: Planning Years 1987-88 through 1991-92," Lane Community College, Office of Institutional Research, Planning, & Evaluation, October 9, 1986.

"Outlook '86 - and Beyond." A Special Report Prepared by Edward Cornish and the Editors of <u>The Futurist</u>. World Future Society, Bethesda, MD, 1986.

"Population in Perspective, Global Population Trends, Challenges Facing World Leaders: A Guide to World Population Issues for Model UN Participants." Population Reference Bureau, Inc., Washington, DC, 1986.

TEF Data: "TEF's U.S. Population Projections for 1980-2030", March 1985, No. 18. Judith Hinds and Lisa C. Olson, The Environmental Fund, DC.

"Population and Environment: Inseparable Policy Issues." Lynton K. Caldwell. Helen Dwight Reid Educational Foundation and the Environmental Fund Monograph Series, 1983, 25:10.
"Citizens Guide to Global Issues." Global Tomorrow Coalition, Washington, DC, 1986.

"Global Environmental Prospects," R. E. Munn and "The Great Climacteric, 1978-2048: The Transition to a Just and Sustainable Human Environment," Ian Burton and Robert W. Kates. Geography, Resources, and Environment: Themes from the Work of Gilbert F. White, Vol. II. Robert W. Kates and Ian Burton, University of Chicago Press, 1986.

State of the World 1987. Lester R. Brown. A Worldwatch Institute Report on Progress Toward a Sustainable Society, W. W. Norton & Company: New York, 1987.

What Lies Ahead: Looking Toward the '90s. United Way of America, Strategic Planning Division, Alexandria, VA, 1987.

## ECONOMICS

"There's a series of generic destabilizers in the economy: our currency instability, third-world debts--all these things that affect the macroeconomic scene, which is no longer predictable."

"If we want to maintain a high-wage economy, we have to find ways for people to add value to the products and services we provide so that we can sell them here and abroad. We have to decide how America is going to become competitive."

- Alex Gibney,
"In Search of Thomas J. Peters"
(An Interview with Tom Peters),
Best of Business Quarterly, Fall 1987; pages 9-15.

**Definition:**

According to Webster's Ninth New Collegiate Dictionary, "economy" is "the thrifty and efficient use of material and nonmaterial resources." As used in this section, "economy" refers specifically to the production, distribution, and consumption of goods and services.

**Trends:**

1. Productivity growth will contribute more to future economic growth than it has during the previous 14 years. The annual rate of economic growth (estimated at 2.4 percent) will be similar to that experienced since 1972, despite slower labor force growth.[5]
2. Greater international competition for markets will occur.[6]
3. Foreign business ownership and investment in U. S. will continue to grow.[6]
4. U. S. imports are expected to exceed exports.[6]
5. U. S. jobs and industries will face growing competition from nations with cheaper labor costs.[6]

6. Agriculture, mining, forestry, manufacturing, and energy sectors will remain depressed.[6]

7. Economic growth for California and 15 East Coast states will exceed nation's average--creating, in effect, a bi-coastal economy.[6]

8. Continued growth of small entrepreneurial businesses will occur.[6]

9. Greater growth to occur in high-income households than in low-income household.[6]

10. Rate of recent erosion of middle class projected to slow.[6]

11. Number of children in poverty to grow.[6]

12. There could be a declining domestic energy production and growing U. S. demand for energy resources.[6]

13. Continued depletion of water supplies will occur, especially in the West and Southwest.[6]

14. Continued concern with pollution-related issues (i.e. acid rain, toxic wastes, indoor air pollution) will occur.[6]

15. The outlook for the Oregon economy over the planning period is for continued economic growth at a very modest rate. Regions of the state which are heavily dependent on agriculture and/or forest products will recover more slowly.[3]

16. There will be considerably less real growth in educational revenues during this economic recovery in comparison to previous recoveries. There will be a lower percentage of federal dollars for education. The percent of the state general fund allocated to education will remain relatively consistent.[3]

17. Greater diversification of the Oregon tax structure with the addition of lottery funds should be beneficial to education. This should be particularly true for postsecondary education, since some funds are earmarked for programs relating to economic development.[3]

18. The percentage of the property tax dollar going to education will continue to decline. As public school enrollments grow, the competition for the property tax dollar will increase, putting further pressure on the property taxes going for educational purposes.[3]

19. There will continue to be pressure to support economic development and local businesses. In addition, the area will embark on a search for new domestic and foreign markets, particularly in the Pacific Rim. This may result in foreign companies locating new facilities in our region.[3]

20. The amount of financial aid available to students will continue to decrease. The recent federally-driven shift from tuition grants to loans has increased the debt burden of many students. The debt saturation point may already have been reached.[8]

21. According to the 1980 Census, the median family income in Lane County is slightly below the average for the state. Within the county, the highest median family incomes were found in North Springfield, Santa Clara, and River Road. The lowest median family incomes were found in Florence and Springfield.[9]

Possible Implications:

* The community will continue to expect LCC to provide preparatory and supplemental training for emerging and existing occupations in business and industry.

* LCC will be expected to participate in joint economic development activities conducted within the community.

* LCC's financial bases will remain the same or decrease slightly. Inorder to improve or maintain current levels of services, the college must increase the effectiveness of existing sources use and increase its financial base by seeking support from additional funding sources.

* It will be necessary for LCC to reallocate resources to accommodate program additions or modifications.

* Although taxpayer willingness to increase property taxes will continue to be too low, a fairly strong measure of support for the college within the community will also continue to exist. If a need is clearly and broadly demonstrated, district taxpayers will be more likely to increase financial support.

* LCC's overall cost per FTE rate will continue above the inflation rate. Therefore, careful examination of the college's current services/offerings and their associated costs must occur to ensure the continued financial stability of the college.

* LCC's students will continue to face financial problems. A greater percentage of student support will need to come from sources other than financial aid.

* LCC will increasingly be called upon to provide training for companies of foreign ownership new to the community.

* Pay scales for local business and industry will continue to be lower than for both the state and country overall. LCC alumnae will, to a disproportionate degree, seek employment outside the district.

* The within-district demand for LCC alumnae in fields related to agriculture, wood products, manufacturing, and energy, will continue to be relatively low.

* LCC provision of assistance to existing small businesses and to those developing such businesses will continue to be of increasing importance.

* There will be an increasing number of area high school graduates unable to afford attending a non-local college or the University of Oregon.

* There will be moderate increasing funding for LCC endeavors in the area of economic development. Such endeavors will continue to expand.

Major Sources for Trends:

"BLS Preview of the Economy of the Year 2000." (News Release) United States Department of Labor's Bureau of Labor Statistics, June 1987.

What Lies Ahead: Looking Forward Toward the '90s. United Way of America, Strategic Planning Division, Alexandria, VA, 1987.

"External Trends: Planning Years 1987-88 through 1991-92." Lane Community College Office of Institutional Research, Planning, & Evaluation, Eugene, Oregon, October 1986. Cited references include Oregon Educational Coordinating Commission "Trends and Assumptions" (July 1986) and Employment Division "Business and Employment Outlook (Lane County)" (December 1985).

# SOCIAL STRUCTURE, VALUES, AND LIFESTYLE

"The dynamics of value and culture change are mysterious and unpredictable. Such changes may tend to be motivated by symbols and metaphors rather than by strictly rational considerations, but they cannot be neglected in any image of the future."

- Kenneth E. Boulding,
"Reflections on Time to Choose",
Geography, Resources, and Environment
Themes From the Work of Gilbert F. White, Vol. II

Definition: The term "values" covers the attitudes, beliefs, opinions, hopes, fears, prejudices, needs, desires, and aspirations that, taken together, govern how people behave.'

Social lifestyles represent an underlying reality of the social system that indicate how much real satisfaction we get out of life and out of activities, environments, productions and consumptions. Values and lifestyles say a good deal about who we are and where we are going and can emerge in patterns that give shape to the quality of life that changes the future.

Trends:

1. The balance of poverty between males and females (including children) will remain fairly constant. The growth, however of poor female-headed families will lead to widespread feminization of poverty, which will also be linked to the increasing number of children born out of wedlock (teenage pregnancy) and to the escalating divorce rate.

2. The rate of erosion of the middle class is projected to slow, but there will be a continued increase in poverty rates of female-headed households and an increase in the number of single parent families (the fastest growing type of family household in the 1980's). Greater income growth will occur in high-income households rather than in low-income households.

3. Non-family households (one person or two unrelated persons) will account for more than half of the new households.

4. Continued influx of women into the workplace with persistence of pay equity issues and attention to a decline in stereotyped job descriptions (degenderification), will foster greater needs for child care and flexible work hours to accommodate lifestyles. There will be increased corporate support for human services dealing with drug and alcohol abuse, child abuse, domestic violence.

5. Homelessness will continue to persist with resulting changes in social services and public awareness.

6. Manufactured housing will increase as housing markets reflect increases in poverty and availability, and growth in smaller household size.

7. A sharp increase in proportion of pre-retirement older adults in the 1990's will be reflected in media, advertisement, consumption, and in needs of services, especially social and medical. The economy will cater and reshape products to conform to consumption needs of a larger proportion of older people in the United States.

8. An older more experienced workforce will reshape the job market. Generational equity, social security, health security, and job security will become public issues.

9. Minority, racial, and civil rights issues will become increasingly apparent as populations reflect increasing diversity and larger proportional mixes of minority groups.

10. Increasing interest in health and fitness will continue with some attention to obesity, especially in children. Greater public attention to how leisure time is spent will be coupled with health and fitness values.

11. Drug abuse and child abuse issues will become increasingly visible as disparity continues in lifestyles and quality of life. This is linked to specific localities, employment, economic, and political factors.

12. The insurgence of AIDS and venereal disease may trigger a movement back to monogamy and fidelity and will affect social sexual values through behavior modifications to reflect "safe" sex or swings toward more cautious sexual encounters. Societal needs for public health and educational services and programs will rise as the AIDS crisis escalates.

13. Television and video will continue to dominate people's leisure hours with electronics producing new amusements and images for the general public. This may reflect new electronic channels for communication through new technologies with rapid information resource input and retrieval.

14. There will be an increase in white collar crime with continued interest in surveillance systems in home and business, especially in high tech systems.

15. There will be growth in the numbers of self-employed, especially those working at home using computers and creating small cottage industries.

16. A variety of religious viewpoints will persist and interest in religion will continue, but religious orientations may change reflecting public issues involving abortion, civil rights, and environmentally charged issues concerning energy, water, air, and quality of life. There will be an increase in the development of moral resources as part of quality of life issues, and in public interest and intent to enlarge human spirit or spiritually.

17. There will be underlying movement in values and attitudes toward greater simplicity of life, making the most of little, especially in areas of energy consumption with changes in technology and opportunities for energy conservation. A conserving society may involve combinations of culture and value change coupled with the capacity to take advantage of technological opportunities.

18. Equity issues will be addressed via "enlightened self-interest" in attitudes as a result of increases in shared perceptions of the world and global predicaments. A "response to crisis" mode with "winning" as an ideal way of resolving conflict will gradually give way to new forms of self interested cooperation.

19. There will be a decline of civility at sports events and the rise in general acceptance of vulgarity publically.

20. Learning will be continued on a lifetime basis.

21. The government is currently initiating policies that attempt to create a national "pro-family" mood that will shift responsibility for the family away from government programs and back to the actual family. Whether or not government policy can reverse the decline of the traditional family remains to be seen. Meanwhile, families -- regardless of their form -- continue to be a primary social institution, and increases in life expectancy create the opportunity for insurers to target products towards the "sandwiched generation" -- those individuals who find that they must go from providing for their children to providing for their elderly parents.

22. There is greater interest in parenting as average family size shrinks and parenting is increasingly seen as a psychologically complex, significant, and challenging role.

**Possible Implications:**

Lifestyle and value trends are representative of people's intention to control their own "quality of life." Living style can be seen on a personal level and is indicative of what attitudes and values are in the immediate surroundings or locality.

Generally, conservatism in America is likely to remain as a broad value with security valued above change:

> Growing evidence suggests that America is developing a "walled- city" mentality toward life that is characteristic of the European past. Americans will favor protectionism, luxury, and exclusiveness. At the same time, America may become a less fluid society. As social mobility decreases, class lines are likely to become clearer and class barriers harder to leap. Class consciousness, historically weak in America, could significantly affect attitudes and, perhaps, politics.
>
> These are longer-term trends. What, then, do Americans believe now, in the mid-1980's? According to a 1986 Gallup poll, Americans think unemployment is the most urgent problem facing the nation. International tensions, the fear of war, and the federal budget deficit are also cited as top concerns. High living costs continue to trouble many Americans, as do the trade deficit and the economy in general. Also mentioned as national problems were a perceived moral and religious decline, crime, drug abuse, the farmers' economic plight, and poverty and hunger.
>
> Thus, although the confidence and optimism of Americans in 1986 are at their highest levels since the start of the decade, the nation as a whole remains concerned over what it sees as some very pressing problems facing America.[8]

* Understandings of global environments and economy, literacy, and social needs in combination with connections to lifestyle should be addressed in LCC's offerings.

* Planning should be given greater emphasis asintegration of internal and external needs are focused upon and expanded to meet LCC's mission, goals, and values for its students, staff, and the broader community.

* Focusing on prevention and problem solution processes is an important aspect of life-long learning. These processes should become an integral part of LCC's daily operations, offerings, and services.

Major Sources For Trends:

Environmental Scanning sheets entitled "Social Lifestyles/Values." Research Project Scanning Sources Noted on Scanning sheets, 1987.

What Lies Ahead: Looking Toward the '90s. United Way of America, Strategic Planning Division, Alexandria, VA, 1987.

"Outlook '86-and Beyond." A Special Report Prepared by Edward Cornish and the editors of The Futurist. World Future Society, Bethesda, MD, 1986.

Geography, Resources, and Environment; Themes From the Work of Gilbert F. White Vol. II. Robert W. Kates and Ian Burton. The University of Chicago Press, 1986.

"Straws in the Wind." Trend Analysis Program, American Council of Life Insurance, Washington, DC, 1986.

"Nine American Values and Lifestyles." Arnold Mitchell. The Futurist. World Future Society, Bethesda, MD, August 1984.

## T E C H N O L O G Y

"The future belongs to people who are able to master our expanding technology. Competing in today's technological society requires advanced skills at a time when the illiteracy rate in the United States is increasing".

"Losing the War of Letters"
TIME, May 5, 1986

**Definition:**

Technological trends refer to developments or advancement in microelectronics, biological science, materials science, and other high-tech areas with special attention to developing areas of:

Personal computers

Fiber optics

Computer software

Biotechnology (especially genetic and hormonal research)

Biomedical research (advances in health related diagnostic/healing equipment and drugs)

Material research (new uses of materials in strength and durability; research in interfaces and thin films which deals with manipulation of structure of materials)

Robotics and lasers

Energy related research and technology (fusion engineering; supercolliders; photovoltaics; super magnets; super conductors; development of soft path and hard path energy technology)

"Knowledge processing": understandings of mind function, decision making and problem solving in conjunction with computer technology used to enhance brain power (includes several disciplines: psychology, economics, operations research, artificial intelligence, mathematical statistics)

Communication technology: global computer networks, international teleconferencing, satellite and cable television advances, video interactive devices and modes, cellular radios)

Transportation technology: improved public transportation and improved movement systems of people and marketable goods; improved automobiles (design and energy consumption)

**Trends:**

1. Advances will occur in microelectronics, biotechnology telecommunications, computers, and materials development.*
2. Pervasiveness of computers and computerized machinery in the workplace will increase.*
3. Continued ethical concerns will be raised by public over technological advances, particularly in biotechnology.*
4. Most new jobs in high-tech industries will be in nontechnical service areas.*
5. There will be continued difficulty in maintaining a work force with sufficient high-tech skills.*
6. Developments in computer communications also will present new opportunities for advertising, solicitation, and provision of information about services and volunteer opportunities.*
7. Growing displacement of workers by automation and technological advances will increase unemployment and result in greater demand for employment training and services to the unemployed.*
8. Emerging computer and telecommunications technology will change various agencies' administrative procedures, including collection and analysis of data and how they network and communicate with each other.*
9. There will be an expanding need to balance technological specialization and integration as opposing processes. Attention will be given to processes that synthesize and network information to make "process" itself more efficient as resources tighten and are viewed as scarce commodities. (Along with this trend will be new understandings of collaborative, on-going, long-range processes in accessing information and problem solving modes of cooperation.)

10. There will be a continuing need for experimentation in research in all fields of technology, and a balancing need for connection to impact real-life or personal situations.

**Possible Implications:**

Technology has now and will continue to have widespread impacts on all aspects of society:

> It could greatly increase the productivity of the American work force, but it could also eliminate jobs and reduce the human skills needed to perform others. Many skilled jobs will be undercut by computers - the very efficiency of computers guaranteeing that they cannot be a major source of employment. Neither high-tech industries nor high-tech occupations will supply many new jobs over the next decade.
>
> Even among the jobs that are generated in high-tech, many are support-level and production jobs that require little or no in-depth knowledge of technology. The skill requirements of others, such as programming, are being lowered through advances in computer hardware and software. The faster that robots, computers, automatic teller machines, and other technical devices spread through the economy, the greater the impact on employment. This means faster growth rates for occupations associated with the production, use, and repair of these devices. It also measures slower or even negative growth rates for occupations replaced by sophisticated technology. Unless people have sufficient education and initiative to take advantage of new kinds of work, they may fall out of the mainstream economy.*

* One of the basic needs of people in an advancing technological society will be the need to have continuing contact with a rich variety of experiences and a sense of connectedness with place, community, and other people. This will especially be true in the workplace and in institutions of learning.

* People will need to have a sense of being able to control their own orientation and to understand how advancing technologies offer personal advantages to their own real-life situations. Programs that offer coping strategies or opportunities to display skills and relate them or apply them to expanding technological knowledge will be needed.

* Because women are concentrated in information fields, their jobs are often the first to be automated and computerized. Special focus on opportunities for training and flexible scheduling to work, learn, and take care of family life should be a priority in considering women's programs.

* The trend towards specialization in all professional fields will require a balancing of integrative approaches. Relating specialized technologies to real-life situations and considerations of factors that will be important in personal applications would be part of this integrative balancing.

* There is no simple answer to solving the complex problems that come with a rapidly changing technological society. If however, technology is properly applied and personally connected, it could provide massive assistance to improve quality of work lives, health, and productivity with shared information. To build the necessary programs and frameworks, there will also be a need to understand and create collaborative/cooperative teams (e.g. committees, task forces), to lend or create recommendations and tackle larger, broader, more long-range problems. An emphasis in on-going process should be the focus by planning departments on enhancing allintegrative approaches that will be needed to keep people oriented and empowered.

Major Sources for Trends

Environmental Scanning Project Sheets entitled "Technology." Research Project Scanning Sources Noted on Scanning Sheets, 1987.

What Lies Ahead: Looking Toward the '90s. United Way of America, Strategic Planning Division, Alexandria, VA, 1987.

"Reflections, Experiencing Places, Part I and II." Tony Hiss. The New Yorker, June 22 and June 29, 1987.

Inquiry: Research at the University of Oregon. A Special Issue of Old Oregon Magazine, January, 1987.

"Straws in the Wind." Trend Analysis Program, American Council of Life Insurance, Washington, DC, 1986.

Emerging Trends: New Oregon Perspectives for the Year 2010. Commission on Futures Research, Progress Report. Willamette University, Salem, OR, 1986.

Careers Tomorrow: The Outlook for Work in a Changing World. Edward Cornish (ed.). World Future Society, Bethesda, MD, 1983.

"Science: Research Opportunities." The Futurist, January-February, 1987.

"Integrative Concepts in Natural Resource Development and Policy." Marion Clawson. Geography, Resources, and Environment: Themes from the Work of Gilbert F. White, Vol. II. Robert W. Kates and Ian Burton. University of Chicago Press: Chicago, IL, 1986.

"Economics: Adjusting to the Information Revolution." The Futurist, October 1983.

"Networking, A Way to Manage Our Changing World?" Noel McInnis. The Futurist, June, 1984.

## EDUCATION

"To state the obvious, that the first duty of schools is education, turns out not to be self-evident. First, there is a strong tendency to equate education with teaching, transmitting skills and knowledge, which it is not; at least that is not the school's only major task. Second, there is a lack of understanding of how important character formation, education's core subject, is 'in itself' for the purpose for which teaching is usually sought - as a source of basic skills for work, for mutuality, for membership in a civil community, and for effective teaching."

- Amitai Etzioni
University Professor, The George Washington University
"Education for Mutuality and Civility"

"Although 95 percent of the young adults (ages 21-25) tested by the Educational Testing Service are able to read and understand the printed word, a considerable number of these young adults lack basic comprehension skills. Only 43 percent of the whites, 24 percent of the Hispanics and 11 percent of the blacks tested were able to synthesize the main argument from a newspaper column. In another test, participants were asked to read about two different types of employee benefits and then to describe orally the distinctions between them; only 11 percent of the whites, three percent of the Hispanics and one percent of the blacks tested were able to master that exercise."

- "Redefining Literacy"
Research Alert, October 31, 1986.
"Straws in the Wind."
From the Trend Analysis Program,
American Council of Life Insurance, 1986.

Definition:

The American Dictionary of the English Language defines education as:

1. The act or process of imparting knowledge or skill; systematic instruction; teaching.

2. The obtaining of knowledge or skill through such a process; schooling.

3. a. The knowledge or skill obtained or developed by such a process; learning.

   b. A program of instruction of a specified level: driver education; a college education.

4. The field of study that is concerned with teaching and learning; the theory of teaching pedagogy.

Educational trends may also be defined or viewed in terms of issues, events, or infusion of societal values.

**Trends:**

**General:**

1. There will be continued higher levels of educational attainment in U.S. population.[6]

2. A teacher shortage will increase in primary and secondary levels and become particularly severe in science and mathematics.[6]

3. College professors are projected to be in short supply.[6]

4. Continued questioning will occur regarding quality of public education in the United States.[6]

5. Continued corporate support to U.S. schools and colleges (mostly to raise scientific literacy) will occur.[6]

6. There will be continued growth of the "corporate classroom" (education programs run by corporations for employees).[6]

7. Increased attention will be focused on illiteracy in the U.S.[6]

8. There will be continued concern with social issues affecting schools: children in crisis due to poverty, child abuse, suicide, running away from home, drug abuse, and teenage pregnancy with specific attention to the health issue of AIDS.

9. There will be continued and expanding focus on "global literacy" and environmentally related issues such as acid rain, toxic waste, environmental pollution, and energy.

10. The quality, value, and relevance of most educational services are declining, but the development of a post-industrial economy means that the population has growing, unmet needs for learning.[6]

11. The costs of education and training have become the biggest single item of spending in the U.S. economy and are rising several times faster than personal income.[8]

12. The demand for government subsidies to education is exploding, but the deficit crisis is going to require fiscal austerity.[8]

13. Modern information technology can be used to increase the productivity of learning, but an entrenched educational establishment obstructs its application.[8]

14. In the coming years, there will be an increasing demand for short-term, specific job training and skill up-dating, including practical experience. Education will become increasingly involved in the workplace and workforce. This will be evidenced by the growing focus on formal schooling for job attainment, continuing education for job maintenance for upgrading, and retraining programs for adults whose jobs no longer exist.[8]

15. Career and vocational education will be desired by much of the population. Jobs involving the creation and distribution of new knowledge will require higher level thinking skills such as scientific, quantitative, and problem solving abilities.[8]

16. Twenty percent of Lane County's current population have completed four or more years of college. It is unclear how many will seek to do that in the future.[8]

17. For a variety of reasons (including the emphasis on continuing education, the presence of more personal flexibility in life planning, the feminization of poverty, and the information explosion which forces continual job retraining), there will be increasing pressure to meet the needs of part-time students and people coping with change.[8]

18. Other educational providers -- including colleges and universities, private schools, and industry training programs -- will be looking for ways to serve new markets and will continue to recruit new students, actively including some of the populations served by community colleges.[8]

19. The educational "marketplace" will become more diverse with improvements in telecommunications. There will be more educational services available in off-campus locations. New pressures will be placed on educational leadership and student-service delivery.[8]

20. The national and state discussions of excellence in education and a trend among federal agencies to link funding to outcome data will create greater emphasis on educational entrance standards, student job placement rates, and other measures of accountability, student outcomes, and teacher effectiveness. Public pressure for improvement in such measures will continue through the remainder of the 1980's.[18]

21. The majority of adult education enrollments will continue to be for job-related reasons. However, a substantial number of adults will enroll in non-job-related courses for personal or social reasons, including self-fulfillment outside the workplace.[3]

22. Technology will not replace instructors, but it will gradually change their role from information provider to that of information interpreter. Instructors will spend more time on subject matter integration, the analysis and implications of ideas and concepts, current events, and on social skills and discipline.[3]

23. As educational opportunities become more diverse, counseling, guidance, planning, and coordinating activities will become more important. Additionally, the task of monitoring program quality will become increasingly important and difficult.[3]

24. Technology will affect the management of education by providing improved capacities to conduct administrative functions on a systematic, coordinated basis. Implementation of on-line integrated information systems will assist student services, the allocation of financial resources, planning, external reporting, and productivity.[3]

Possible Implications:

The most obvious of educational trends is growing illiteracy, thus illuminating the need for relevance and coherence in program offerings. The continuing trend toward program specialization in response to rapidly changing technology is also apparent. These trends point out the need for balance in terms of specialized and broad educational offerings. Education must consider, adapt, and cope with the changes in the local community and society in context with the broader complexities of the global community and then integrate changes for rapid adaption while preserving its own integrity.

Viewing trends offers a unique window for reflecting on basic values and decisions regarding restructuring institutions and finding perspective for future planning decisions. How far into the future does an educational institution plan and how collaborative is the model? What sort of time horizon can be constructed so that the planning process allows sufficient broad feedback from those involved in all aspects of the institution to reflect and choose appropriate programs that are healthy for individuals and the institution? How is diversity nurtured?

The following implications call for articulation of flexible offerings and careful consideration of how to balance the dynamic relationship between specialized and broad educational needs.

* There is an increase in demand for contracted short-term training which must include the elements of flexibility and strong links with community groups, organizations, business, industry, and other public entities.

* There is an expectation that LCC is to play a key role in addressing literacy concerns, especially in worker retraining programs.

* An increased demand for accountability will be seen with increased attention to student outcomes assessment, student retention, and resource utilization.

* Continuing shifts to greater part-time student participation will increase the demand for courses at non-traditional hours, linking education and training pursuits to current job or future job plans. This will emphasize the seeking of specific skills and knowledge as opposed to a broad educational focus.

* With the aging of the population there will be a greater number of people interested in leisure pursuits pointing to increased pressure for offerings in self improvement and general education.

Major Sources for Trends:

Environmental Scanning Project sheets entitled "Education." Research Project Scanning Sources noted in Bibliographies and scanning sheets, 1987.

What Lies Ahead: Looking Toward the '90s. United Way of America, Strategic Planning Division, Alexandria, VA, 1987.

"Reflections: Experiencing Places Part I and II." Tony Hiss. The New Yorker, June 22 and June 29, 1987.

"Emerging Issues for Oregon: New Perspectives and Recommendations." Commission on Futures Research, Legislative Recommendations, Willamette University, Salem, OR, January, 1987.

Phi Delta Kappan. Issues spanning January - June, 1987.

"External Trends: Planning Years 1987-88 through 1991-92, Lane Community College, Office of Institutional Research, Planning, & Evaluation, October 9, 1986.

Various Titles from The Futurist Magazine:

"Learning Our Lesson, Why School is Out." Lewis J. Perelman. March - April, 1986.
"The Future of U. S. Education." John D. Haas. July - August, 1987

"Teaching the Great Issues of the Future." Dan B. Fleming. January-February, 1987.
"Schools of the Future, Education Approaches the Twenty-First Century." Marvin J. Creton, Barbara Soriano, Margaret Gayle. August, 1985.
"Education for Mutuality and Civility." Amitai Etzioni.
Careers Tomorrow: The Outlook for Work in a Changing World. Edward Cornish (ed.): World Future Society, Bethesda, MD, 1983.

"Global Environmental Prospects." R. E. Munn. "The Citizen-Scholar: Education and Public Affairs." Elliot J. Feldman.
Geography, Resources, and Environment: Themes From the Work of Gilbert F. White, Vol. II. Robert W. Kates and Ian Burton. University of Chicago Press, 1986.

## EMPLOYMENT

"About ninety percent of the new jobs through 1995 will be in the service-producing sector....The predominant number of those jobs will be areas that require post-secondary high school skills."

William E. Brock,
"The American Work Force in the Year 2000",
AACJC Journal,
February/March 1987, pages 25-26.

"Underneath the appearance of substantial overall job creation...is America proliferating low-wage jobs and perhaps even shifting toward an increasingly polarized labor market structure?"

Barry Bluestone and Bennet Harrison,
"The Great American Job Machine:
The Proliferation of Low Wage Employment in the U.S. Economy,"
United States Congress Joint Economic Committee;
December 1986.

Definition:

According to the U. S. Department of Labor's official definition, the labor force consists of all persons 16 years of age and older who are either employed or unemployed. Persons who are employed are receiving wages or salaries. Persons are counted as unemployed if they are out of work, available for work, actively seeking work, waiting to be recalled from a layoff, or waiting to report to a new job within 30 days.

**Trends:**

1. The labor force will grow more slowly than in the past and will reach 139 million in the year 2000. The workforce of the future will be older, more experienced, and made up of more women and minority workers than in the past.[3]

2. Service-producing industries will add nearly 21 million jobs by the year 2000.[3]

3. Employment in manufacturing will decline as manufacturing's share of total employment goes to 14 percent in 2000. The output share of the nation's factories, however, is projected to hold steady.[3]

4. Some industries will grow very rapidly, including most business services--especially computer and data processing and personnel supply--and health services, particularly offices of health practitioners, nursing and personal care facilities, and outpatient care.[3]

5. Employment in the broad occupational groups that require the most educational preparation--such as executive, administrative, and managerial workers; professional workers; and technicians and related support workers--will grow faster than the average. The occupational groups requiring the least educational preparation are expected to grow slowly or decline, except for the rapidly growing service workers.[3]

6. Pay-equity issues will persist.[4]

7. Greater availability of child care and flexible hours is expected in the workplace.[4]

8. More businesses will be owned by women.[4]

9. There will be growth the in number of self-employed. Many will work at home using computers.[4]

10. Expectations are for continued gradual improvement in Lane County's unemployment rate, with averages in the 8-9 percent range through 1988.[3]

11. With the exception of a slow down in 1980-82, the service-producing industries have clearly outperformed the goods-producing sector of the local economy. It is safe to assume that non-manufacturing and service-producing employment will continue to dominate Lane County's employment through the 1980's and 1990's.[3]

12. Some sectors of the economy (e.g., trade, services, and non-lumber manufacturing) are expected to keep growing in 1987-88, but at a slower pace. The manufacturing industry will account for approximately 18-20 percent of Lane County's employment in 1988. The strongest manufacturing growth is projected in the non-lumber manufacturing industries (e.g. electronic equipment, recreational vehicle manufacturing, food products). Trades and services are expected to produce the greatest increase in employment.[3]

13. Structural unemployment is caused by a mismatch between types of jobs available and the skills of the workers. There is no accurate assessment yet as to the current impact of structural unemployment on Lane County. However, it is assumed that pre-recession lumber and wood products employment will never again be reached. In addition, the shift to modernization and an information/service economy will result in an increased number of dislocated workers. The mismatch between new jobs and the available worker skills will create a growing need for retraining opportunities for adults whose jobs no longer exist.[3]

14. There has been a decrease in the number of manufacturing sector jobs which are relatively high paying and have good benefits. Simultaneously, the number of relatively low paying, poor benefit jobs in the service-producing sector are increasing.[3]

    Services and retail trade continue to be the strongest growing industries and have the best outlook for employment growth in the future. However, these tend to be the industries which pay the lowest wages, have many part-time employees, and have high percentages of low-skill, dead-end jobs (Appendix, Tables 1 and 2).[3]

15. Most of the occupations with the best employment outlook are in sales and the hospitality, health, business, and personal service fields (Appendix, Table 3).[3]

16. Between now and the year 2000, employment will continue moving away from the timber industry. While it is generally true that high technology industries are expected to grow faster than the average overall during the eighties, they will represent a relatively small portion of Lane's economic base. The largest broad occupational groups (clerical, professional and technical, and service) are expected to maintain their positions as the major providers of jobs through 1992 (Appendix, Table 4).[3]

17. Ordinarily, occupations in a geographic area or an industry are assumed to change and adapt slowly to changes in technology, products, and production efficiency. Although many futurists proclaim that white collar occupations will soon outnumber manufacturing or blue collar occupations, the change is expected to come gradually. Lane County's long-term occupational projections indicate that a shift in the occupational mix will be well underway by the early 1990's, but that craft workers, operatives, and laborers will continue to be an important part of the local economy.[8]

18. One out of every two women 16 years or older is a member of Lane County's workforce. Approximately 50 percent of the mothers of children under age six are employed, and 67 percent of the mothers of grade school children are employed. The fastest growing group in the workforce is mothers with children under age one. These trends increase the pressure to provide infant and child care in the workplace and boost the demand for day care workers and early childhood professionals.[9]

<u>Possible Implications:</u>

* Employment opportunities for LCC alumnae in areas related to manufacturing or agriculture will continue to lag behind employment in general. Opportunities for employment in health services, business areas, food services, child care services, and - to a lesser extent - computer and other technology services, will increase modestly.

* Women alumnae will continue to be employed most often in jobs providing less salary than jobs for men alumni, although the difference in salaries will slowly decrease.

* There will be continued improvement in the percentage of LCC alumnae employed within a year after leaving LCC, though the percentage employed in jobs relating to majors may not increase.

* An increasing number of LCC alumnae will require retraining within five years of leaving LCC in order to continue their present employment or to find new employment due to displacement.

* Overall, salary and benefits for LCC alumnae, while increasing gradually, will continue to be less than for the state or nation as a whole.

* The number and percent of LCC women alumnae seeking employment related to LCC training will continue to increase.

* It will be increasingly important for LCC students to attain knowledge and skills in such areas as lifelong learning, planning, flexibility and coping, use of leisure, and positive work-life attitude. Strengths in these areas will gradually assume equal or greater importance than specific technical skills in relation to a student's lifelong employment prospects.

Major Sources for Trends:

"BLS Preview the Economy of the Year 2000." (News Release) United States Department of Labor's Bureau of Labor Statistics, June 25, 1987.

What Lies Ahead: Looking Forward Toward the '90s. United Way of America, Strategic Planning Division, Alexandria, VA, 1987.

"External Trends: Planning Years 1987-88 through 1991-92." Lane Community College, Office of Institutional Research, Planning, & Evaluation, Eugene, OR, October, 1986.

B. Bluestone and B. Harrison, "The Great American Job Machine: The Proliferation of Low Wage Employment in the U. S. Economy." U. S. Congress Joint Economic Committee, December, 1986.

## ENDNOTES

[1] Renfro, Wm. L. and Morrison, J. "The Scanning Process: Getting Started." Applying Methods and Techniques of Futures Research, New Directions for Institutional Research, (September, 1983) 5-6.

[2] Kates, R.W. and Burton, Ian (ed.) Geography, Resources, and Environment: Themes from the Work of Gilbert F. White, Vol. II. (Chicago: University of Chicago Press, 1986) 272-3.

[3] External Trends: Planning Years 1987-88 through 1991-92." Lane Community College, Office of Institutional Research, Planning, & Evaluation, October 9, 1986.

[4] Caldwell, L.K. "Population and Environment: Inseparable Policy Issues." Helen Dwight Reid Educational Foundation and the Environmental Fund Monograph Series, 1983, 25:10.

[5] BLS Previews the Economy of the Year 2000." (News Release) United States Department of Labor's Bureau of Labor Statistics, June, 1987.

[6] What Lies Ahead: Looking Toward the '90s. United Way of America, Strategic Planning Division, Alexandria, VA, 1987.

[7] Mitchell, A. "Nine American Values and Lifestyles." The Futurist, August, 1984.

[8] Perelman, L. "Learning Our Lesson: Why School is Out." The Futurist, March-April, 1986.

## BIBLIOGRAPHY

## FUTURES RESEARCH; ENVIRONMENTAL SCANNING; STRATEGIC PLANNING:


### Books:

Callan, P.M. (ed.)
Environmental Scanning for Strategic Leadership. New Directions for Institutional Research, No. 52. San Francisco: Jossey-Bass, 1986.

Morrison, J.L., Renfro, William L., Boucher, Wayne I. (Editors)
Applying Methods and Techniques of Futures Research. New Directions for Institutional Research, No. 39. San Francisco: Jossey-Bass, 1983.

Morrison, J.L. and Mecca, T.V. Ed Quest: A Process for Linking Environmental Changes With Strategic Management. 27th Annual AIR Forum, Kansas City, MO, May 3-6, 1987.

Morrison, J.L., Renfro, W.L., Boucher, W.I. Futures Research and the Strategic Planning Process: Implications for Higher Ed. ASHE, ERIC Clearinghouse on Higher Education, The George Washington University Report No. 9, 1984.

Uhl, N.P. (ed.) Using Research for Strategic Planning. New Directions for Institutional Research, No. 37. San Francisco:Jossey-Bass, 1983.

### Articles and Papers:

Barker, J.A. "Discovering the Future: The Business of Paradigms." ILI Press, St. Paul, MN.

Bartram, J.W. and Johnson, S. "Discussion Notes for the Panel: The Impact of Environmental Scanning on Strategic Planning." Paper presented at the 27th Annual AIR Forum, Kansas City, MO, May, 1987.

Bartram, J.W., Presenter. "Workshop on Environmental Scanning". Presented at NCHEMS 1986 Annual Assembly, Denver, CO, September, 1986.

Eadie, D.C., "Strategic Agenda Management: A Powerful Tool for Government." National Civic Review, 74:1 January, 1985.

Eadie, D.C. "Strategic Issue Management: Improving the Council-Manager Relationship." MIS Report, 18:6, June, 1986.

Eadie, D.C., Ellison, NM., Brown, G. C. "Incremental Strategic Planning: A Creative Adaptation." Planning Review, May, 1982.

Eadie, D.C., & Podojil, E.J. "Strengthening Council Leadership Through Strategic Issue Management." Public Management, May, 1986.

Heydinger, R.B. "Formal Marketing: The Environmental Scan." College Market Alert, Minneapolis, MN, April, 1987.

Govoni, S.J. "Transcendental Trepidation." Financial World, July 28, 1987.

McMullen, H.G. "The Well-Futured College: Reaching For Tomorrow Today." Community College Journal for Research and Planning: Literature for Researchers, Middletown, VA.

Morrison, J.L, "Establishing an Environmental Scanning/Forecasting System to Augment College and University Planning." Planning For Higher Education, 15:1, 1987.

Morrison, J.L. "Report of 1986 AIR Special Interest Group on Environmental Scanning." Paper presented at the 26th Annual AIR Forum, Orlando, FL, June, 1986.

Nanus, B., "Quest - Quick Environmental Scanning Technique." Long Range Planning, 15:2. Great Britain: Pergamon Press, 1982.

Nunley, C. "Focus on the Future: Involving Institutional Constituencies in Environmental Examination." Planning for Higher Education, 15:1, 1987.

Pflaum, A.M. & Delmont, T.J., "External Scanning in Public and Private Organizations Implications for Strategic Management in Higher Education, Basic Elements in External Scanning." Paper presented at the 25th Annual AIR Forum, Portland, OR, April-May, 1985.

Renfro W.L. & Morrison, J.L. "Detecting Signals of Change: The Environmental Scanning Process." The Futurist, August, 1984.

Stevens, P.D. "Scenarios As A Planning Stimulus In Changing Times". Paper presented at Society of College and University Planners, Harrisburg Area Community College, Harrisburg, PA, July, 1986.

West Virginia University Office of Institutional Analysis and Planning. "Nominal Group Technique: A Strategic Planning Tool". Morgantown, WV, 1986.

Higher Education Environmental Scans:

California, North Alameda County, "The Peralta Colleges, Environmental Scan. An Environmental Scan of Northern Alameda County", October, 1986.

Connecticut, Hartford, "University of Hartford, Strategic Planning and Resource Allocation", Robert H. Glover, Ph.D., Director of Planning and Institutional Research, University of Hartford, Prepared for the 27th Annual Forum of the Association for Institutional Research, May 3-6, 1987.

Maryland, Baltimore, Baltimore County "Catonsville Community College, Environmental Scan and Forecast", September, 1986.

Michigan, Environmental Scanning", Information from Martha L. Hesse, Michigan State University, April, 1987.

Mississippi, University of Mississippi, "Economic Long Waves and Higher Education", Bobby H. Sharp, Associate Director and James O. Nichols, Director, University Planning and Institutional Research, University of Mississippi, Paper presented at the 27th Annual AIR Forum, Kansas City, MO, May, 1987.

Missouri, St. Louis. "An Environmental Scan for St. Louis Community College, A Working Tool for Task Force Members" 1986 Update.

Pennsylvania, Philadelphia. Information from Thomas R. Hawk, Community College of Philadelpia, regarding its environmental scan 1985-86.

## APPENDIX

Table 1

CHANGES IN EMPLOYMENT BY OCCUPATION

| Jobs Lost To Recession | Occupation | Jobs Gained In Recovery |
|---|---|---|
| - 5,420 | Craft and Operative Workers | 1,470 |
| - 2,560 | Laborers | 420 |
| - 1,780 | Technical/Professional/ Manager | 1,260 |
| - 1,590 | Clerical | 940 |
| - 2,550 | Sales/Service | 1,910 |
| -13,900 | Total | 6,000 |

Table 2

CHANGES IN EMPLOYMENT BY INDUSTRY
Salaries in ()

| Jobs Lost To Recession | Industry | Gained In Recovery |
|---|---|---|
| - 3,800 | Lumber ($22,800) | 0 |
| - 900 | Durables ($18,300) | 900 |
| gained 200 | Nondurables ($21,000) | 500 |
| - 2,900 | Construction ($18,700) | 300 |
| - 900 | Services ($13,800) | 2,300 |
| - 2,500 | Retail Trade ($10,000) | 1,700 |
| - 4,100 | All Other Non-Manufacturing | 200 |
| -14,900 | Total | 6,000 |

Table 3

OCCUPATIONS WITH THE LARGEST JOB GROWTH; LANE COUNTY

| OCCUPATIONAL TITLE | EMPLOYMENT 1984 | EMPLOYMENT 1992 | CHANGE NUMBER | CHANGE PERCENT | PERCENT OF TOTAL JOB GROWTH |
|---|---|---|---|---|---|
| Sales Representative | 4260 | 4958 | 698 | 16.4 | 5.7 |
| Cashier | 1907 | 2282 | 375 | 20.0 | 3.1 |
| Secretary | 2268 | 2618 | 350 | 15.4 | 2.9 |
| Sales Clerk | 1874 | 2212 | 338 | 18.0 | 2.8 |
| Janitor/Cleaner/Housekeep | 2805 | 3123 | 318 | 11.3 | 2.6 |
| Waiter/Waitress | 2084 | 2398 | 314 | 15.1 | 2.6 |
| Truck Driver | 2042 | 2336 | 294 | 14.4 | 2.4 |
| Bookkeeper | 1315 | 1583 | 268 | 20.4 | 2.2 |
| General Clerk | 1815 | 2062 | 247 | 13.6 | 2.0 |
| Nurse Aide/Orderly | 965 | 1183 | 218 | 22.6 | 1.8 |
| Fast Food Worker | 1391 | 1591 | 200 | 14.4 | 1.6 |
| Store Manager | 1148 | 1333 | 185 | 16.1 | 1.5 |
| Kitchen Helper | 1285 | 1459 | 174 | 13.5 | 1.4 |
| Teacher,Elementary/Presch | 1792 | 1946 | 154 | 8.6 | 1.3 |
| Welder/Flamecutter | 552 | 703 | 151 | 27.4 | 1.2 |
| Typist/Word Processor | 1065 | 1202 | 137 | 12.9 | 1.1 |
| Delivery Driver | 753 | 882 | 129 | 17.1 | 1.1 |
| Receptionist | 718 | 832 | 114 | 15.9 | 0.9 |
| Bartender | 705 | 815 | 110 | 15.6 | 0.9 |
| Accounting Clerk | 881 | 986 | 105 | 11.9 | 0.9 |

Table 4

OCCUPATIONAL EMPLOYMENT PROJECTIONS - LANE COUNTY

| OCCUPATIONAL TITLE | 1984 EMPLOYMENT | 1992 EMPLOYMENT | CHANGE 1984 - 1992 NUMBER | CHANGE 1984 - 1992 PERCENT |
|---|---|---|---|---|
| TOTAL ALL OCCUPATIONS | 97370 | 109567 | 12197 | 12.53 |
| PROFESSIONAL & TECHNICAL | 16643 | 18595 | 1952 | 11.73 |
| Engineers | 435 | 514 | 79 | 17.36 |
| Technicians | 2085 | 2387 | 302 | 14.48 |
| Medical Workers | 2091 | 2301 | 210 | 10.04 |
| Computer Specialists | 261 | 327 | 66 | 25.29 |
| Teachers | 6381 | 6800 | 419 | 6.57 |
| All Other | 5370 | 6246 | 876 | 16.31 |
| MANAGERS & OFFICERS | 8382 | 9678 | 1296 | 15.46 |
| Buyers, Sales, Loan Mgrs. | 613 | 684 | 71 | [illegible] |
| Restaurant Mgr. | 557 | 637 | 80 | [illegible] |
| Store Mgr. | 1148 | 1333 | 185 | 16.11 |
| All Other | 6064 | 7024 | 960 | 15.83 |
| SALES WORKERS | 7414 | 8642 | 1228 | 16.56 |
| Sales Representatives | 4260 | 4958 | 698 | 16.38 |
| Sales Clerks | 1874 | 2212 | 338 | 18.04 |
| All Other | 1280 | 1472 | 192 | 15.00 |
| CLERICAL WORKERS | 18686 | 21274 | 2588 | 13.85 |
| Secretary, Typist | 3459 | 3963 | 504 | 14.57 |
| Office Machine Operator | 629 | 769 | 140 | 22.26 |
| Bookkeeper | 1315 | 1583 | 268 | 20.38 |
| Cashier | 1907 | 2282 | 375 | 19.66 |
| Receptionist | 718 | 832 | 114 | 15.88 |
| Stock Clerk, Warehouse | 678 | 772 | 94 | 13.86 |
| Estimators & Investigators | 408 | 482 | 74 | 18.14 |
| Statistical Clerks | 162 | 178 | 16 | 9.88 |
| General Clerk | 1815 | 2062 | 247 | 13.61 |
| All Other | 7595 | 8351 | 756 | 9.95 |
| CRAFT WORKERS & SUPERVISORS | 10277 | 11437 | 1160 | 11.29 |
| Construction Craft Workers | 1473 | 1794 | 321 | 21.79 |
| Heavy Equipment Operators | 492 | 568 | 76 | 15.45 |
| Supervisors, NEC | 1571 | 1648 | 77 | 4.90 |
| Metalworking Crafts | 585 | 693 | 108 | 18.46 |
| Mechanics, Repairers | 1723 | 1938 | 215 | 12.48 |
| Printing Trade Crafts | 404 | 482 | 78 | 19.31 |
| Transport & Utility Crafts | 498 | 527 | 29 | 5.82 |
| All Other | 3531 | 3787 | 256 | 7.25 |
| OPERATIVES | 12689 | 14048 | 1359 | 10.71 |
| Metalworking, Semiskilled | 1031 | 1261 | 230 | 22.31 |
| Packaging, Semiskilled | 754 | 831 | 77 | 10.21 |
| Assemblers | 833 | 1003 | 170 | 20.41 |
| Garage Workers | 814 | 909 | 95 | 11.67 |
| Meat Cutters, Butchers | 187 | 226 | 39 | 20.86 |
| Sawyers | 582 | 564 | -18 | -3.09 |
| Food Product Mach. Oper. | 228 | 298 | 70 | 30.70 |
| Lumber Product Mach. Oper. | 694 | 646 | -48 | -6.92 |
| Transport Equipment Oper. | 4381 | 4856 | 475 | 10.84 |
| All Other | 3185 | 3454 | 269 | 8.45 |
| SERVICE WORKERS | 15751 | 17869 | 2118 | 13.45 |
| Cleaning Service | 2805 | 3123 | 318 | 11.34 |
| Food Service | 8009 | 9144 | 1135 | 14.17 |
| Health Service | 2065 | 2433 | 368 | 17.82 |
| Personal Service | 1040 | 1173 | 133 | 12.79 |
| Attendant Personal Service | 223 | 266 | 43 | 19.28 |
| Protective Service | 1074 | 1151 | 77 | 7.17 |
| All Other | 535 | 579 | 44 | 8.22 |
| LABORERS EXCEPT FARM | 7071 | 7593 | 522 | 7.38 |
| Gardener, Groundskeeper | 415 | 445 | 30 | 7.23 |
| Tree Planter | 482 | 547 | 65 | 13.49 |
| Stock Clerk, Sales Floor | 412 | 498 | 86 | 20.87 |
| Construction Laborer | 419 | 496 | 77 | 18.38 |
| Freight & Material Handler | 1689 | 1602 | -87 | -5.15 |
| Timber & Lumber Worker | 941 | 901 | -40 | -4.25 |
| All Other | 2713 | 3104 | 391 | 14.41 |
| FARM WORKERS | 457 | 431 | -26 | -5.69 |



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